



Hazardous Substances
Technical Liaisons

OFFICE OF RESEARCH AND DEVELOPMENT HAZARDOUS SUBSTANCES TECHNICAL LIAISON REGION 9 NEWSLETTER Fall 2005, Edition 33

Hello! It's time again for the quarterly ORD/EPA Region 9 Newsletter. You may be among a number of new readers this quarter, so a quick introduction is in order. I'm Mike Gill and serve as the ORD technical liaison to Region 9, offering various types of ORD technical support to the Region 9 waste programs staff (Superfund, RCRA and Brownfields) and this newsletter is my attempt at compiling the latest in waste-related technical guidance, information on new cleanup technologies and upcoming meetings and conferences. Welcome! If you think you received this by mistake, let me know and I'll remove your name.

For this quarter, check out the [latest technology verifications](#) from the ETV program, a [new perchlorate in groundwater measurement instrument](#) called an [ion selective electrode](#), and an [application of nanotechnology for metals detection](#) in soil and groundwater. The latest in waste characterization and cleanup guidance and reports are also included, along with a listing of the related conferences and workshops. There is even a reference to [Spanish language resources for Superfund](#). This is compiled from multiple sources, including the ETV program, OSWER's TechDirect and the ORD NRMRL newsletter, all of which I greatly appreciate. Thanks for reading this and please send any comments my way!

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NATIONAL NEWS

New Tools and Technologies

ETV COLLABORATES WITH DOD FOR WATER TREATMENT SYSTEM TESTING (From ETV newsletter)

The ETV Drinking Water Systems Center, operated in cooperation with NSF International, is forming collaborations with the U.S. Department of Defense (DoD) and the U.S. Bureau of Reclamation to test a water treatment system designed to help provide water to areas with brackish or saltwater as their primary water source. This collaboration marks the first ETV verification testing of a desalinization water treatment system. Areas benefitting from this type of treatment technology may include the southwest United States, ocean coastal regions, and areas of scarce water supplies. NSF will oversee verification testing of DoD's Expeditionary Unit Water Purification (EUWP) by the Bureau of Reclamation. For more information, please contact Bruce Bartley, NSF, at (734) 769- 5148 or bartley@nsf.org.

ADSORPTIVE MEDIA TECHNOLOGY FOR ARSENIC REMOVAL VERIFIED

(From ETV Newsletter)

The ETV Drinking Water Systems Center, in cooperation with NSF International, has verified the performance of the ADI Pilot Testing Unit No. 2002-09 with MEDIA G2 system, developed by ADI International, Inc. The unit is an adsorption media filter system designed to reduce arsenic in drinking water. The verification testing was conducted at the Hilltown Township Water and Sewer Authority Well Station No. 1 in Sellersville, PA, and consisted of two phases. The first phase, the Integrity Test, was designed to evaluate the reliability of equipment operation under the environmental and hydraulic conditions at the well station site during the initial two weeks of testing. The second phase, the Capacity Test, evaluated the capacity of the arsenic adsorption system to remove arsenic from the Well No. 1 feed water. The verification report and statement will be available on the ETV Web Site at:
<http://www.epa.gov/etv/verifications/vcenter2-14.html>.

NDCEE Demonstrates a Field-Based Perchlorate Measurement Instrument

(Thanks to Lenny Siegel of CPEO and the National Defense Center for Environmental Excellence (NDCEE) Newsletter - Winter 2005)

During August and September 2004, the NDCEE successfully completed a demonstration of a field-deployable prototype instrument that measures perchlorate concentrations in water. Field demonstrations were held at Edwards Air Force Base and Rialto, California, using perchlorate-contaminated groundwater samples. Demonstration results indicate that the instrument offers advantages over U.S. Environmental Protection Agency (EPA) Method 314: it uses less expensive components, can be hand-portable for on-site testing, produces faster results, has a potentially lower detection limit, and is less prone to interference in high-salinity samples. Based on these results, the DoD has expressed an interest in the technology to aid with perchlorate-related surveys and monitoring activities that are in progress at several DoD installations.

Perchlorate is a primary ingredient in solid fuel missile and rocket propellants, explosives, and pyrotechnics and has been identified by the EPA as potentially harmful to human health. In October 2003, the DoD established a policy regarding measurement and monitoring for perchlorate contamination at DoD installations. The Air Force has been designated as the DoD lead for perchlorate issues, with assistance from the DoD Perchlorate Working Group, the Naval Facilities Engineering Command, and the Army Environmental Center.

The technology uses ion chromatography in conjunction with an ion selective electrode (ISE). During the demonstration, approximately 45 electrodes were tested and a detection limit of 10 parts per billion was obtained. Furthermore, the technology produced results within five minutes compared to the 20 minutes needed for EPA Method 314. In addition, data obtained from the analysis of the groundwater samples containing high concentrations of perchlorate showed good correlation with data from a commercial laboratory that used EPA Method 314, which is the accepted standard for laboratory perchlorate analysis.

The NDCEE is helping the DoD to identify a commercialization partner for this technology. To better meet DoD needs, future modifications to the prototype may include reducing the weight and volume of the device, which would improve its portability, and modifying the pH of the mobile phase by mixing a pH-modifying buffer into the flow stream that is between the ion chromatography and ISE. Other areas that require modification include improving electrode stability, making reproducible ISEs, improving the calibration method, and establishing a verifiable way to measure a wide range of perchlorate concentrations.

For more information on the perchlorate monitor, please contact:

Hany Zaghloul <hany.h.zaghloul@erdc.usace.army.mil>

Bill Tumblin, NDCEE<tumblinw@ctc.com>

To download the NDCEE newsletter as a PDF file, go to

<http://www.ndcee.ctc.com/reading-room.html> and click on the Winter 2005 edition of the newsletter.

Superfund Basic Research Program (SBRP) - Disaster Assistance

The SBRP has funded research/outreach activities at over 100 hazardous waste sites. It falls under the National Institute of Environmental Health Sciences (NIEHS). This research is described in detail on their webpage (<http://www-apps.niehs.nih.gov/sbrp/>) and the locations are shown on the map below. Here is some related news from their online newsletter:

Research to Practice....NIEHS Response to the Hurricane Katrina Disaster

"As the environmental health research institute of the National Institutes of Health, the NIEHS is uniquely positioned to provide information on the sources and the potential human health impacts of exposures, and we are committed to supporting emergency responders with useful and readily accessible information. The NIEHS Katrina response website (<http://www-apps.niehs.nih.gov/katrina/>) provides environmental health information to frontline public health and safety workers deployed to impacted communities. SBRP researchers from University of California-San Diego, Duke University, University of Kentucky, and Columbia University are making major contributions to this effort."

Superfund En Espanol

(From Tech Direct)

A mediados de septiembre, la Agencia de Protección Ambiental de los Estados Unidos lanzó una nueva página Web en español, Superfund en Español, que le ofrece a la comunidad hispana una amplia variedad de información relacionada al Programa de Superfund. La nueva página Web describe diferentes tecnologías usadas frecuentemente en los sitios de Superfund, tales como sistemas de bombeo y tratamiento, extracción de vapores del suelo, cobertura de vertederos, y otros. La página contiene documentos en español que describen el proceso de restauración y los métodos de la limpieza, un glosario bilingüe de términos comunes usados en el programa de Superfund de la EPA, y en la página de Preguntas Frecuentes presenta más de cien preguntas y

respuestas con amplia informacion relacionada a las distintas areas del programa. Ademias contiene documentos en espanol relacionados al programa de Relaciones y Ayuda a la Comunidad, incluyendo el Programa de Donaciones de Asistencia Tecnica. A traves de esta pagina Web, la EPA espera proveer a la comunidad hispana la informacion y herramientas necesarias que les permitiran participar significativamente en el proceso de limpieza del programa de Superfund. Para mas informacion visite Superfund en Espanol en el siguiente enlace: <http://www.epa.gov/superfund/spanish/index.htm> .

LOCAL NEWS

MTBE & TBA: Comprehensive Assessment and Remediation Class - August 10-12, 2005

EPA Region 9 recently hosted and co-sponsored this above mentioned class, which was put on by the Interstate Technical and Regulatory Council (ITRC). In the Course Evaluation Summary, Joe Haas, the Team Training Coordinator and manager from the New York State DEC said that the course "...may have been our best-received event to date." The class covered the basics of MTBE and TBA, from chemistry to fate and transport, but focused on its cleanup in groundwater. He went on to say the following:

"The San Francisco course elements contained several notable firsts. Most noteworthy of the firsts were the new practical session and the 2.5-day format. There were 64 attendees who completed the course from who we received back 40 course evaluation forms. The evaluation forms are the primary basis of this course evaluation summary."

The ITRC memo had tables attached that summarized the evaluation ratings and comments received in regard to each of the course modules. The evaluation results revealed that the course attendees overwhelmingly evaluated the course to be very good to superior with many outstanding ratings being received as well. For more info about this version, or future offerings of the class, please go to the ITRC "MTBE and Other Oxygenates" Team website located at: http://www.itrcweb.org/teampublic_MTBE.asp .

Research in Region 9: High Specificity of Metal Detection Achieved by Nanocontact Sensors and Polymer Nanojunction

(From Technology News and Trends, September 2005 -

Researchers at Arizona State University (ASU) are working under a STAR grant to develop high-performance, low-cost sensors for initial onsite screening of heavy metals in ground and surface water. To enhance field portability, the fully developed sensors will be miniaturized and wireless and employ a printed wire board capable of integrating data collected from several probes. Field testing of the prototype sensors is anticipated in 2007.

Each sensor consists of an array of nanoelectrode pairs on a silicon chip. Within each pair, the nanoelectrodes are separated by an atomic-scale gap created by quantum tunneling (Figure 1). Electrochemical deposition of only a few metal ions into the gap forms a bridge and provides nanocontact between the electrodes, thus triggering a quantum jump in electrical conductance. Different metals have different anodic deposition and stripping potentials. This allows the sensor to achieve high specificity by combining measurements such as redox potentials, point-contact spectroscopy, and electrochemical potential-modulated conductance changes.

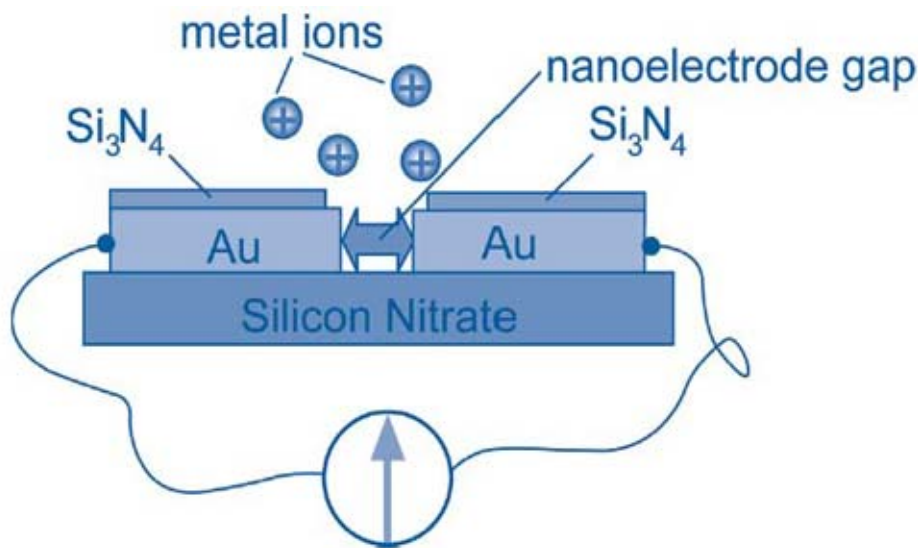


Figure 1. Electronic beam lithography provides the nanoscale sensor with an approximate 50-nm nanoelectrode gap in which metal anodic deposition and stripping can be quantified.

Results of preliminary tests on samples containing elevated copper concentrations showed that the deposition time needed to bridge the nanoelectrode gap decreased across samples as copper concentrations increased. Detection of copper at the EPA limit of 10⁻⁵ mol/L was achieved within 7 seconds, while 1-nanomolar concentrations were detected in 16 seconds. Similar results were observed in lead detection tests.

This approach can be enhanced through use of peptide-modified polymers that change conductance between the nanoelectrodes in the presence of heavy metal ions. When integrated, these polymer nanojunction sensors obtain more sensitive and real-time measurement of heavy

metals in ground or surface water with higher accuracy.

Performance testing of laboratory-based models of the nanocontact sensors involved measurement of copper in drinking water samples collected from different surface water sources. Sensor data were compared to information measured by conventional laboratory techniques such as atomic absorption spectrometry with a 90% correlation between the data sets. Integrated results from the nanocontact and polymer nanojunction sensors were obtained in approximately 96 and 97% less time, respectively, than those gathered from multiple laboratory procedures.

ASU researchers are developing a similar field-portable sensor for use in monitoring air quality and arsenic in ground water, as well as other molecular- and nanojunction-based chemical and biological sensors based on carbon nanotube and polymer technologies. Under a second STAR grant, the group is investigating the fate, transport, transformation and toxicity of manufactured nanomaterials of drinking water.

Contributed by Erica Forzani, Ph.D., Nongjian Tao, Ph.D., and Paul Westerhoff, Ph.D., ASU (480-965-9058 or erica.forzani@asu.edu)

DATEBOOK - UPCOMING EVENTS

This section of the newsletter is an attempt to present both EPA and non-EPA sponsored environmental technology related courses and conferences. But being a quarterly publication, it is impossible for this newsletter to always be up-to-date. For the most pertinent information on upcoming EPA courses, see <http://www.trainex.org>. These events are listed chronologically.

Many of the entries in these newsletters are from TIO's "TechDirect" emails (thank you Jeff Heimerman!). TechDirect prefers to concentrate mainly on new documents and the internet live events. However, they do support an area on the CLU-IN webpage where announcement of conferences and courses can be regularly posted. Sponsors can input information on their events at <http://clu-in.org/courses>. Likewise, the page has an area for upcoming events that might be of interest. It allows users to search events by location, topic, time period, etc.

Many of you know that www.clu-in.org routinely places seminars in the CLU-IN Studio archive after they have aired. This provides access to the slides and the audio file for each presentation. Some of you requested that they make these audio files more portable. Now they have done that. For more recent seminars, you now have the option to download them in MP3 format which will allow you to listen via portable music players. You may also subscribe to the podcast feed, which will alert you when new seminar archives are available. For more information, see <http://clu-in.org/live/archive.cfm>.

ITRC Internet Based Training

These are typically 1-2 hour online courses where the participant follows a webpage presentation, while listening on the phone. Check - <http://www.itrcweb.org> or <http://www.clu-in.org/studio/seminar.cfm> for times and registration.

NOTE: All dates/times are subject to change – check <http://www.itrcweb.org> for the most up-to-date information.

Oct. 18th - *An Overview of Direct Push Well Technology for Long-term Groundwater Monitoring*

2:00 p.m. to 4:15 p.m. EASTERN Time [TENTATIVE – registration should open by 9/26] – new offering

Oct. 20th - *Strategies for Monitoring the Performance of DNAPL Source Zone Remedies*
11:00 a.m. to 1:15 p.m. EASTERN Time

Oct 26th - *Enhanced Remediation of DNAPL-Contaminated Subsurface Systems*
To register, see <http://clu-in.org/studio> .

Nov. 3rd - *Design, Installation, and Monitoring Alternative Final Landfill Covers*
11:00 a.m. to 1:15 p.m. EASTERN Time

Nov. 8th – *Radiation Site Cleanup: CERCLA Requirements & Guidance*
2:00 p.m. to 4:15 p.m. EASTERN Time

Nov. 10th - *Triad Approach: A New Paradigm for Environmental Project Management*
11:00 a.m. to 1:15 p.m. EASTERN Time

Nov. 17th - *Constructed Treatment Wetlands*
11:00 a.m. to 1:15 p.m. EASTERN Time

December 6th - *Site Investigation and Remediation for Munitions Response Projects*
2:00 p.m.–4:15 p.m. Eastern

December 8th - *Current Information on Perchlorate Contamination*
11:00 a.m.–1:15 p.m. Eastern

December 13th - *Geophysical Prove-Outs for Munitions Response Projects*
2:00 p.m.–4:15 p.m. Eastern

December 15th - *Operational Small Arms Firing Ranges–Environmental Management at Operational Outdoor Small Arms Firing Ranges*
11:00 a.m.–1:15 p.m. Eastern

US EPA Workshop on Nanotechnology for Site Remediation
October 20-21, 2005
Washington DC
<http://www.scgcorp.com/nanositeremed/index.asp>

Challenges in Site Remediation: Site Characterization, Technology Screening and Testing, and Performance Monitoring

October 23-27, 2005

Chicago, IL

<http://www.redoxtech.com/>

EPA Tech Support Project Meeting

October 24-27, 2005

San Antonio, TX

<http://www.epa.gov/tio/tsp>

25th Biennial Groundwater Conference & 14th Annual GRA Meeting

October 25-26, 2005

Sacramento, CA.

<http://www.grac.org/am.html>

Technical Considerations for Evaluating and Implementing Dredging and Capping Remedies

October 25-27, 2005

New York, NY

<http://www.trainex.org>

EPA/OSP Remote Sensing Workshop

November 1 – 3, 2005

U.S. EPA Region 5 Office, Chicago, IL 60604

<http://www.scgcorp.com/remotesensing05/>

2005 Brownfields Conference
November 2-4, 2005
Denver, CO
<http://www.brownfields2005.org/en/index.aspx>

LNAPLS & DNAPLS

November 2-4, 2005

New Orleans, LA

<http://www.ngwa.org/>

2005 NGWA Remediation Conference: Site Closure and the Cost of Cleanup

November 7-8, 2005

New Orleans, LA

<http://www.ngwa.org/>

AWRA 2005 Annual Conference

November 7-10, 2005

Seattle, WA

<http://www.awra.org/meetings/Seattle2005/index.html>

International Congress of Nanotechnology (ICNT)

October 31-November 4, 2005

San Francisco, CA

<http://www.ianano.org/>

2005 Superfund Basic Research Program (SBRP) Annual Meeting

November 9-10, 2005

New York City

<http://www-apps.niehs.nih.gov/sbrp/events/index.cfm>

SETAC North America 26th Annual Meeting

Baltimore, MD

November 13-17 2005

<http://www.setac.org/baltimore/baltimore.html>

Chemical Agents of Opportunity for Terrorism:

The Medical and Psychological Consequences of TICs (Toxic Industrial Chemicals) and TIMs (Toxic Industrial Materials)

November 17, 2005

U.S. EPA - Region 9 Building, San Francisco, CA

<http://www.trainex.org/offeringlist.cfm?courseid=275&all=yes>

California Water Policy Conference 2005

November 17-18, 2005

Hollywood, CA

<http://www.cawaterpolicy.org/>

Technical Considerations for Evaluating and Implementing Dredging and Capping Remedies

November 29 - December 1, 2005

Chicago, IL

<http://www.trainex.org>

2005 Partners in Environmental Technology Technical Symposium & Workshop (SERDP / ESTCP)

November 29-December 1, 2005

Washington, D.C.

<http://www.serdp.org/symposiums/2005/Call4Abstracts/index.cfm>

2005 Materials Research Society (MRS) Fall Meeting

Hynes Convention Center & Sheraton Boston Hotel

Boston, MA

November 29 - December 3, 2005

<http://www.mrs.org/meetings/fall2005/program/index.html>

Pollutec

November 29 - December 2, 2005

Paris, France

http://www.pollutec.com/?Jpto=116&KM_Session=bdbe79881931716948726413c0b9ba1b&Lang=GB&Tpl=

2005 AGU Fall Meeting

December 5-9, 2005

San Francisco, CA

<http://www.agu.org/meetings/fm05/>

DNAPL SOURCE ZONE CHARACTERIZATION & REMEDIATION

December 7-8, 2005

San Francisco, CA

<http://www.grac.org/dnapl>

2005 Ground Water Expo

December 13-16, 2005

Cobb County, GA

<http://www.ngwa.org/e/expo05/0512136010.shtml>

Improving Analytical Techniques for Monitoring Contaminants

December 18-19, 2005

Honolulu, Hawaii

<http://www-apps.niehs.nih.gov/sbrp/events/index.cfm>

SBRP Annual Meeting

January 12-13, 2006

New York Academy of Medicine, New York, NY

<http://www-apps.niehs.nih.gov/sbrp/events/index.cfm>

The Transport of Sediments and Contaminants in Surface Waters

January 15-20, 2006

Fess Parker's DoubleTree Resort

Santa Barbara, California

For further information, contact Wilbert Lick at 805-964-2088 or willy@engineering.ucsb.edu.

2006 Waste Management National Meeting (Follow up to the National RCRA Meeting)

01/18/2006 - 01/20/2006

Arlington, VA

<http://www.awma.org/events/confs/RCRA2006/default.asp>

2006 Waste Tech Landfill Technology Conference

02/27/2006 - 03/01/2006

Phoenix, AZ

<http://wasteage.com/news/Landfill-Conference-072505/>

Economic Analysis for Ground Water Remediation: A Tool for Decision-Making

02/27/2006 - 02/28/2006

Anaheim, CA

<http://www.ngwa.org/>

AEHS 16TH ANNUAL WEST COAST CONFERENCE ON SOILS, SEDIMENTS, AND WATER

MARCH 13-16, 2006

MISSION VALLEY MARRIOTT

SAN DIEGO, CA

<http://www.aehs.com/conferences/westcoast/index.htm>

International Conference on Solid Waste Technology and Management

March 26-29, 2006

Philadelphia, PA

<http://www.eiforum.org.uk/home.asp?pageID=739>

GLOBE 2006

March 29-31, 2006

Vancouver, Canada

<http://www.globe2006.com>

Joint 8th Federal Interagency Sedimentation Conference and 3rd Federal Interagency Hydrologic Modeling Conference

April 2-6, 2006

Reno, NV

http://water.usgs.gov/wicp/acwi/sos/conf/call_papers_final_10.01.04.pdf

Second International Symposium and Exhibition on The Redevelopment of Manufactured Gas Plant Sites (MGP 2006)

April 4-6, 2006

Reading, UK

<http://mgp2006.instep.ws/>

Design and Construction Issues at Hazardous Waste Sites Conference

April 19-20, 2006

Philadelphia, PA

<http://www.rdra.org/construction/>

2006 Ground Water Summit

04/23/2006 - 04/26/2006

San Antonio, TX

<http://www.ngwa.org/e/conf/0604235095.shtml>

National Association of Environmental Professionals' 31st Annual Conference

04/23/2006 - 04/26/2006

Albuquerque, NM

<http://www.naep.org/CONFERENCE06/Albuquerque.html>

WasteExpo 2006 and Medical Waste Conference

04/24/2006 - 04/27/2006

New Orleans, LA

<http://www.wasteexpo.com/>

EnviroExpo & Conference 2006

05/02/2006 - 05/03/2006

Boston, MA

<http://www.enviroexpo.com/>

Solid/Hazardous Waste Conference and Exhibition

05/03/2006 - 05/05/2006

Gatlinburg, TN

<http://www.state.tn.us/environment/swm/conference/>

EPA's NARPM 2006 Conference

May 2006

New Orleans, LA (location may change)

<http://www.epanarpm.org>

5th National Monitoring Conference "Monitoring Networks: Connecting for Clean Water"

May 7-11, 2006

San Jose, CA

http://water.usgs.gov/wicp/acwi/monitoring/conference/2006/calendar_annct_06.pdf

MODFLOW and More 2006: Managing Ground-Water Systems Conference

May 21-24, 2006

Golden, Colorado

<http://www.mines.edu/igwmc/events/modflow2006/modflow2006.shtml>

Fifth International Battelle Conference on Remediation of Chlorinated and Recalcitrant Compounds

May 22-25, 2006

Monterey, CA

<http://www.battelle.org/environment/er/conferences/chlorcon/default.stm>

Environmental Effects of Agricultural Practices: Remediation, Prevention, and Sustainability
(co-sponsored by the Midwest HSRC at Kansas State, US EPA, UC Davis)

August 6-9, 2006 (no webpage yet)

Sacramento, CA

Conference on Mercury as a Global Pollutant

Madison, Wisconsin

August 6-11, 2006

www.mercury2006.org

Second Biennial Central and Eastern European Environmental Health Conference (CEEHC)

October 22-25, 2006

Bratislava, Slovakia

WEB PAGES



News from the Western Region Hazardous Substance Research Center

(Thanks to Maria Wright of Oregon State University)

The [Western Region Hazardous Substance Research Center](http://wrhsrc.oregonstate.edu/briefs/brief_8.htm) (WRHSRC) is a partnership between Oregon State University and Stanford University and is one of five university-based hazardous substance research centers in the United States. The Center's research focus is on the development of in situ treatment methods for groundwater contaminated with volatile organic compounds (VOCs). Their website is: http://wrhsrc.oregonstate.edu/briefs/brief_8.htm .

New Research Brief on Aerobic Cometabolism with Butane-Grown Microorganisms

This short web article describes Center research on aerobic cometabolism, an emerging cleanup technology that utilizes microorganisms to degrade TCE and other chloroethenes. [Research Brief #8](http://wrhsrc.oregonstate.edu/briefs/brief_8.htm) (http://wrhsrc.oregonstate.edu/briefs/brief_8.htm) describes studies by Daniel Arp and Peter Bottomley and their research team at Oregon State University. The term cometabolism indicates that transformation of the contaminants is a secondary reaction. The microbes consume a hydrocarbon, such as butane for their energy needs. In the process, they produce enzymes that fortuitously degrade other compounds such as TCE.

Oregon State University launches Subsurface Biosphere Initiative

This summer, OSU launched an initiative to expand research and teaching about the subsurface biosphere. The University will invest \$1.5 million over five years in the program -- funding will support new faculty hires and encourage collaboration between researchers and students in five colleges. Bioremediation will be one focus area for the initiative and it will involve many faculty from the Western Region Hazardous Substance Research Center, an EPA supported center. For more information visit the following website: <http://oregonstate.edu/leadership/strategicplan/subsurface.html> .

National Environmental Publications Information System (NEPIS)

This site offers access to over 11,000 EPA scientific and technical publications. Approximately 1,000,000 pages are available for viewing and are fully text searchable and printable. The site allows you to search by title or publication number; download documents in either PDF or TIFF format. It includes Advanced Search features. See <http://nepis.epa.gov/> .

Updated Contaminant Focus Area on CLU-IN

Comprehensive revisions to the arsenic, chromium VI, and perchlorate sections of Contaminant Focus have recently been posted. The Contaminant Focus area bundles information associated with the cleanup of individual contaminants and contaminant groups. This information is presented in categories such as Policy and Guidance, Chemistry and Behavior, Environmental Occurrence, Toxicology, Detection and Site Characterization, Treatment Technologies, and Conferences and Seminars. The TCE, PCBs, 1,4-Dioxane, and MTBE sections will be updated in the coming months. They welcome any suggestions you may have for new topics or additional resources. Visit Contaminant Focus at <http://clu-in.org/contaminantfocus> .

RECENT DOCUMENTS, DATABASES, ETC.

These entries are arranged alphabetically. Thanks to TechDirect, Tech Trends, NRMRL News, the ETV Program, DOE, DoD and others for posting their latest documents. And remember, many of these are available in paper format in the Region 9 library. Use your local library.....

Abstracts of Remediation Case Studies, Volume 9
(EPA 542-R-05-021)
(July 2005, 81 pages)
http://clu-in.org/download/techdrct/td_frtr_vol9.pdf

Comparison of Diffusion- and Pumped-Sampling Methods to Monitor Volatile Organic Compounds in Ground Water,
Massachusetts Military Reservation, Cape Cod, Massachusetts
Scientific Investigations Report 2005-5010, July 1999–December 2002
(Spring 2005, 60 pages)
Stacey Archfield and Denis LeBlanc
<http://pubs.water.usgs.gov/sir2005-5010/>

Evaluation of a Former Landfill Site in Fort Collins, Colorado Using Ground-Based Optical Remote Sensing Technology
(EPA 600-R-05-042)
(April 2005, 54 pages)
<http://clu-in.org/21m2>

Evaluation of Fugitive Emissions at a Former Landfill Site in Colorado Springs, Colorado Using Ground-Based Optical Remote Sensing Technology
(EPA 600-R-05-041)
(April 2005, 49 pages)
<http://clu-in.org/21m2>

Field Tests of Nylon-Screen Diffusion Samplers and Pushpoint Samplers for Detection of Metals in Sediment Pore Water, Ashland and Clinton, Massachusetts, 2003
(USGS SIR 2005-5155)

(September 2005, 56 pages)

<http://clu-in.org/21m2>

Groundwater Contamination: DOD Uses and Develops a Range of Remediation Technologies to Clean Up Military Sites

(GAO-05-666)

(June 2005, 46 pages)

<http://clu-in.org/download/techdrct/gao-report.pdf>

A Guide to the Proper Selection and Use of Federally Approved Sediment and Water-Quality Samplers

(USGS 2005-1087)

(2005, 26 pages)

http://water.usgs.gov/osw/pubs/OFR_2005_1087/OFR_2005-1087.pdf

Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities (HHRAP), Final

<http://www.epa.gov/epaoswer/hazwaste/combust/risk.htm>

The Inventory of Sources and Environmental Releases of Dioxin-Like Compounds in the United States: The Year 2000 Update

(External Review Draft, EPA/600/p-03/002A)

(March 2005)

<http://www.epa.gov/ncea/pdfs/dioxin/2k-update/>

Proceedings for the 2005 International Phytotechnologies Conference

<http://clu-in.org/phytoconf/agenda.cfm>

Pushpoint Sampling for Defining Spatial and Temporal Variations in Contaminant Concentrations in Sediment Pore Water near the Ground-Water/Surface-Water Interface
Scientific Investigations Report 2005-5036

<http://pubs.water.usgs.gov/sir2005-5036/>

Road Map to Understanding Innovative Technology Options for Brownfields Investigation and Cleanup, Fourth Edition

(EPA 542-B-05-001)

(September 2005, 170 pages)

<http://clu-in.org/download/techdrct/roadmap4.pdf>

Sensor Technologies Used During Site Remediation Activities - Selected Experiences
(EPA 542-R-05-007)

(September 2005, 110 pages)

<http://clu-in.org/download/techdrct/542r05007.pdf>

Site Characterization Library Version 3.0

(DVD--EPA 542-C-05-001; CD EPA 542-C-05-002)

(June 2005)

Copies can be ordered from NSCEP at (800) 490-9198 or (513) 489-8190

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The State Coalition for the Remediation of Drycleaners (SCRD) Newsletter

(July 2005, 4 pages)

<http://www.drycleancoalition.org/download/news0705.pdf>

Technology News and Trends-July 2005

(EPA 542-N-05-004)

<http://clu-in.org/download/techdrct/td-tnandt0705.pdf>

Technology News and Trends - Sept 2005

(EPA 542-N-05-005)

<http://clu-in.org/download/techdrct/tnandt0905.pdf>

UST Systems: Inspecting and Maintaining Sumps and Spill Buckets

(EPA 510-R-05-001)

(May 2005, 20 pages)

<http://www.epa.gov/swerust1/pubs/sumpmanl.htm>

Serious Scientists Gather 'Round.....

Some recent journal releases.....do the titles tell it all??

TI: Estrogens light up genetically modified fish

AU:

JN: Environmental Science and Technology

PD: 2005

VO: 39

NO: 8

PG: 169A

PB: ACS AMERICAN CHEMICAL SOCIETY

IS: 0013-936X

PE: APR 15

URL: <http://www.ingentaconnect.com/search/expand?unc=1052288122>

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TI: The changing chemistry of office cubicles

AU:

JN: Environmental Science and Technology

PD: 2005

VO: 39

NO: 15

PG: 319A-319A

PB: ACS AMERICAN CHEMICAL SOCIETY

IS: 0013-936X

PE: AUG 01

URL: <http://www.ingentaconnect.com/search/expand?unc=1053888305>

Click on the URL to access the article or to link to other issues of the publication.

TI: Safe swimming depends on the moon's phase

AU:

JN: Environmental Science and Technology

PD: 2005

VO: 39

NO: 15

PG: 313A

PB: ACS AMERICAN CHEMICAL SOCIETY

IS: 0013-936X

PE: AUG 01

URL: <http://www.ingentaconnect.com/search/expand?unc=1053888303>

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TI: Advanced Oxidation of Caffeine in Water: On-Line and Real-Time Monitoring by Electrospray Ionization Mass Spectrometry

AU: Dalmazio, I; Santos, LS; Lopes, RP; Eberlin, MN; Augusti, R

JN: Environmental Science and Technology

PD: 2005

VO: 39

NO: 16

PG: 5982-5988

PB: ACS AMERICAN CHEMICAL SOCIETY

IS: 0013-936X

PE: AUG 15

URL: <http://www.ingentaconnect.com/search/expand?unc=1053971436>

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Thanks for reading it! Comments and suggestions are appreciated. If you wish to be added to or deleted from this list, please send me an email.
(gill.michael@epa.gov)

Newsletter archives can be found on the EPA intranet site.....

<http://intranet.epa.gov/ospintra/scienceportal/htm/hstlnews.htm>

A number of environmental technology web resources can be found here.....

<http://www.epa.gov/region09/waste/techlinks/>

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